HELGEN

Preventing the next
Pandemic
Bioterrorism
Bioattack

We are NOT prepared for any future biothreats

Increased risk of bioweapons and uncontrolled outbreaks

- Biology is being weaponized faster than ever, with the advancement in synthetic biology & AI
- Climate change issue: 25% of another pandemic occurring in the next decade
- Geopolitical instabilities heightens the chance of biological warfare

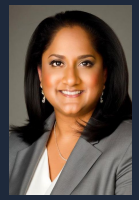
Current solutions are severely inadequate

The defining biosurveillance system is the US/DHS BioWatch program - manual, slow, laborious biosurveillance:

- Daily, manual collection of filters
- 24 - 36 hours to get result
- Expensive equipment and maintenance
- Reactive, not proactive

"The biological threat is increasing, our Nation grows increasingly vulnerable to this threat, and the catastrophic consequences are far too great to ignore"

October 2019, congressional hearing (US)



Dr. Asha M. George, DrPH

Executive director of the bipartisan commission on biodefense (US)

"BioWatch (current infrastructure) does not deliver information quickly enough for officials to make effective, lifesaving decisions"

December 2021, DHS Fiscal review and future work report (US)

Kathryn Coulter Mitchell

Chief of staff Department of homeland security

Introducing **HELGEN**

Near-continuous biosurveillance infrastructure for governments and public institutions to detect and prevent diseases faster, cheaper, automated and proactively

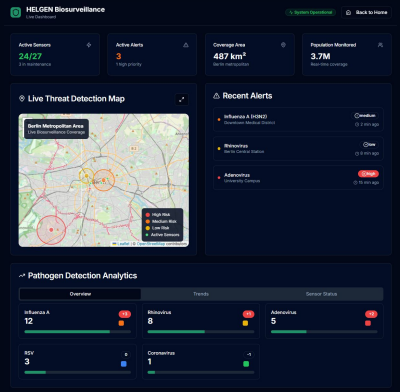
A faster, automated biosurveillance

HELGEN cBSU

- A rugged biosensor for deployment in target areas
- Real-time detection of airborne biothreats
- Application: government monitoring of disease outbreaks, bioterrorism first warning system, potential farm / facilities outbreak alert system

HELGEN surveillance dashboard

- A universal biothreat detection and rapid response dashboard
- AI-powered data processing for advanced disease spread modeling and response prediction



HELGEN is faster, cheaper, automated and proactive

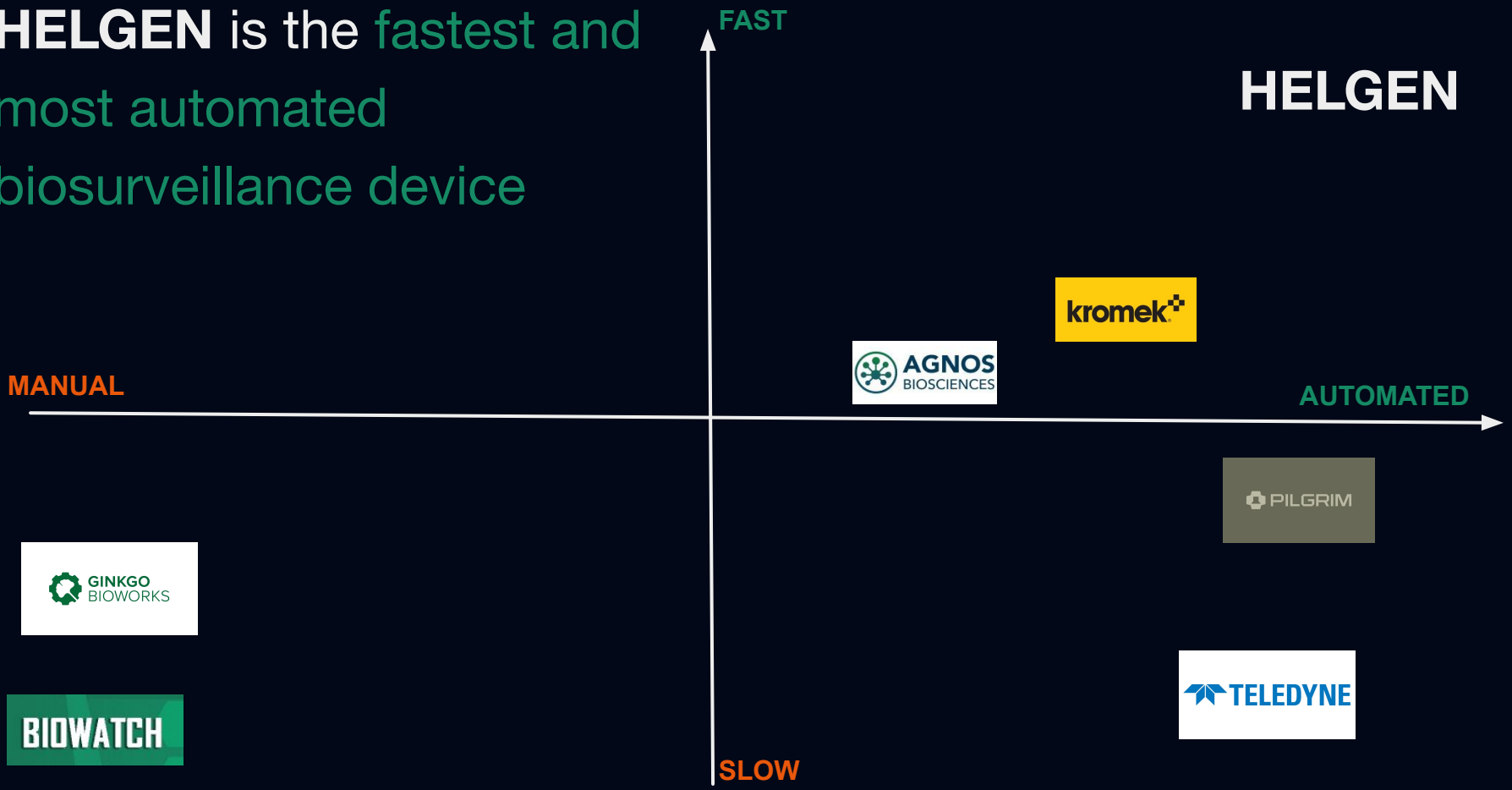
Existing solutions	HELGEN core benefits
• Manual sample collection and external lab analysis results in +24h response time delays	• **Rapid (<1 h) and automated detection** of biological threats, enabling faster responses and containment
• Requires constant human intervention in the field and lab	• **Automated process** — reduces human exposure and labor
• Reactive, late response to post-threats due to time gap between monitoring	• **Proactive situational awareness** by continuous monitoring
• No biosurveillance network: no spatial- and temporal-context data collection	• **Facilitates large-scale biosurveillance network with spatiotemporal context**
• Expensive hardware and maintenance cost	• **Up to 70x cheaper hardware & 12x cheaper annual maintenance cost***

*based on public data compared with our price estimation

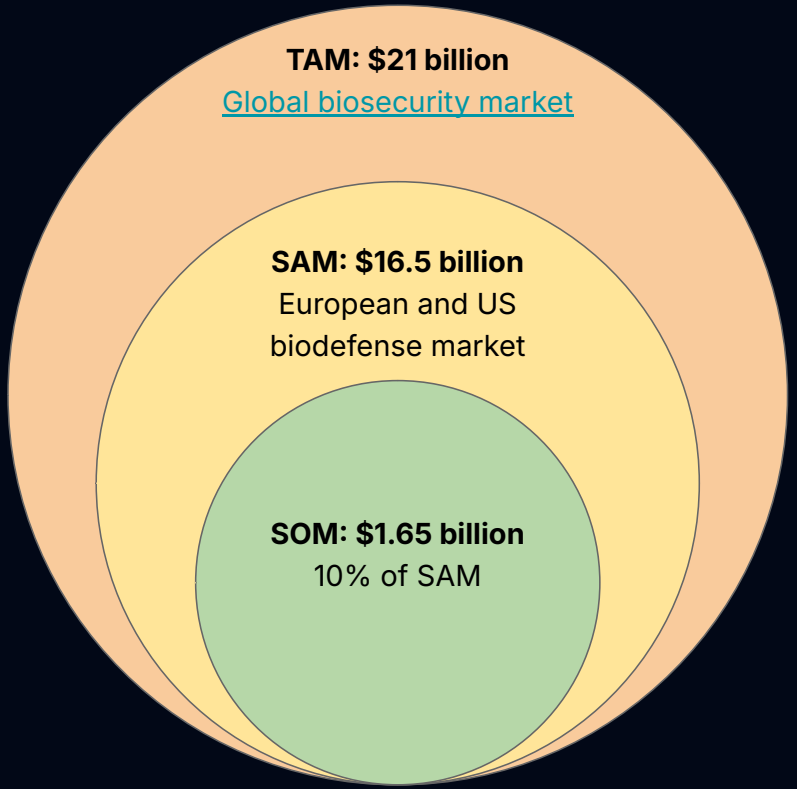
How the world changes if **HELGEN** exists

- Cities detecting outbreaks before hospitals fill up.
- Hospitals spotting airborne infections hours before staff get sick.
- Farms preventing animal losses and supply chain disruptions.
- Foods companies minimizes product recalls and brand reputation damages.
- Ports avoiding shutdowns that ripple across global logistics.
- Safer workplaces, safer events, safer daily life.

HELGEN is the fastest and most automated biosurveillance device



We are entering a big, niche market ripe for disruption



Accelerating trend

- Infectious diseases concerns, increasing geopolitical tension (bioterrorism threat), environmental monitoring

Tech convergence

- recent advancements in AI + connectivity + miniaturization of biodetectors lower cost and enables real-time detection.

Use cases

1. Government & army: stable revenue → combating bioterrorism
2. Public health→ urban pathogen tracking
3. Enterprise (airports, hospitals, farms, pharma) → ESG, insurance compliance, R&D

Business model

- Hardware sales (cBSU) — high upfront revenue, but commoditization risk.
- Service contracts for cBSU — installation, maintenance, validation, regulatory compliance.
- Software agreement for HELGEN Surveillance platform (continuous Saas)

Strategy: Biosurveillance platform supremacy

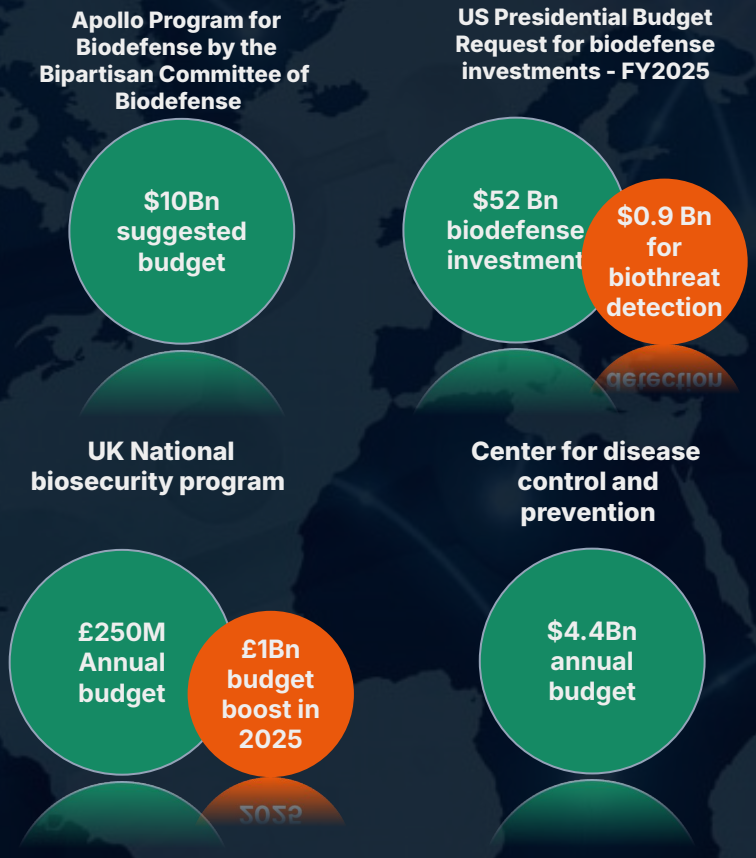
Model: Hardware enabled platform company

HELGEN wins through data scale: using mass deployment of affordable sensors to gain platform monopoly in a winner-takes-all platform market.

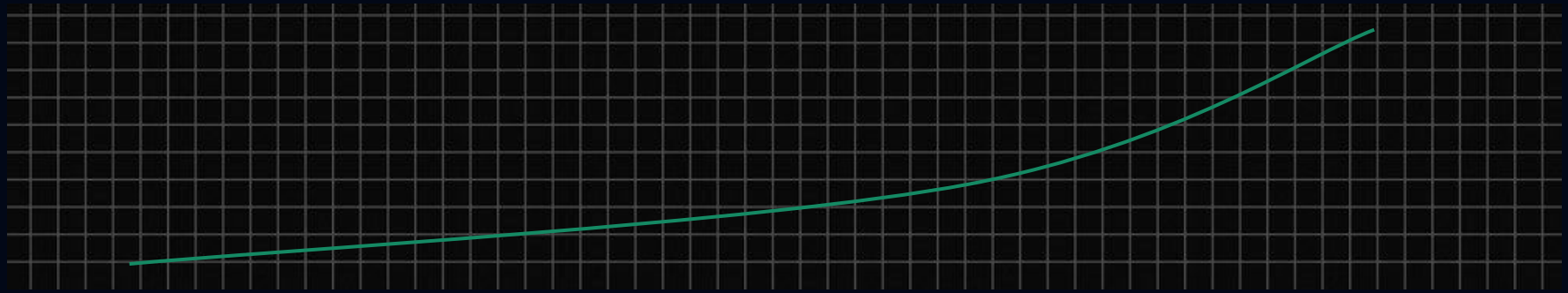
Revenue sources

- Hardware (one-time) + maintenance (recurring) + SaaS (recurring)
- Unique epidemiological data insight, available for sale to external stakeholders
- API access to third party integrations, strengthening platform position

Biosecurity - a growing concern for governments



Vision - A universal biosurveillance platform



HELGEN biosurveillance infrastructure

Our core product acts as a defensible moat; collecting valuable genetic data; analyzes, classifies, and derives insights from it.

Networking effect of big biodata

Systems over time are able to predict outbreak spots, perform risk modelling, creating global surveillance network.

Platform supremacy

By opening our platform to third-party sensors while advancing our own innovations, HELGEN positions itself as the leading platform for biosurveillance.

Your friendly neighborhood team

Gian Leonardo
Founder

Will Fischer
Hardware Engineer

James Cooper
Hardware Engineer

Matthew Lux
Bioengineer

Vinith Gollapudi
Biomechanical Engineer